

REMARKS

In the Office Action, the Examiner rejected claims 1-34 and 51-63. By this Response, Applicant amends claims 1, 16, 27, 31, 34 and 51 and adds new claims 64-75. These amendments and new claims do not add any new matter. Upon entry of these amendments, claims 1-34 and 51-75 remain pending in the present application. The Applicant respectfully requests reconsideration and allowance of all claims in view of the foregoing amendments and the following remarks.

Claim Rejections under 35 U.S.C. § 102

In the Office Action, the Examiner rejected claims 1-9, 12-21, 24-34, 51-56, and 59-63 under U.S.C. § 102(e) as being anticipated by Knox et al. (U.S. Publication No. 2004/0252421). The Applicant respectfully traverses these rejections.

Legal Precedent

Anticipation under Section 102 can be found only if a single reference shows exactly what is claimed. *Titanium Metals Corp. v. Banner*, 778 F.2d 775, 227 U.S.P.Q. 773 (Fed. Cir. 1985). For a prior art reference to anticipate under section 102, every element of the claimed invention must be identically shown in a single reference. *In re Bond*, 910 F.2d 831, 15 U.S.P.Q.2d 1566 (Fed. Cir. 1990). To maintain a proper rejection under Section 102, a single reference must teach each and every limitation of the rejected claim. *Atlas Powder v. E.I. du Pont*, 750 F.2d 1569 (Fed. Cir. 1984). Accordingly, the Applicant needs only point to a single element not found in the cited reference to demonstrate that the cited reference fails to anticipate the claimed subject matter. The prior art reference also must show the identical invention “in as complete detail as contained in the ... claim” to support a *prima facie* case of anticipation. *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 U.S.P.Q. 2d 1913, 1920 (Fed. Cir. 1989).

Claim Features of Independent Claim 1 Omitted from Cited Reference

Turning to the claims, the present independent claim 1 recites, *inter alia*, “a machine mountable base comprising a motor protection device; and a modular control unit replaceably mountable to the machine mountable base, wherein the modular control unit comprises control circuitry configured to control the machine.”

The Examiner stated that Knox discloses:

a machine mountable base [Fig. 3 housing base 41; par. 0020 modular base housing portion] comprising a motor protection device [Fig. 3 the Digital Signal Processor DSP 55 in housing 46; par. 0008]; and a modular control unit [Fig. 5 microcontroller 75; par. 0104] replaceably mountable to the machine mountable base [par. 0030], wherein the modular control unit comprises a control circuitry [Digital Signal Processor DSP 55] selected for a desired machine.

Office Action, page 2. The Examiner’s analysis is flawed for several reasons.

First, the Examiner has identified the DSP 55 of Knox as both the motor protection device of the machine mountable base and the control circuitry of the modular control unit. This reasoning cannot stand. The DSP 55 is a component of the digital programmable motor overload protector 1, not the micro-controller 75. Knox, page 5, paragraph [0095]. Therefore, the Examiner has not identified a modular control unit having “control circuitry configured to control the machine” as recited in the present independent claim 1. As such, the Examiner has failed to make a *prima facie* case of anticipation under Section 102.

Assuming, *arguendo*, that the Examiner actually intended to identify the removable user interface 2 as the modular control unit of the present claim, the micro-controller 75 cannot be construed as “control circuitry configured to control the machine” as recited in the present independent claim 1. The micro-controller 75 controls the

removable user interface 2, not the machine to which the overload protector is connected. Knox, page 19, paragraph [0222] – page 21, paragraph [0234]; Figs. 48-51.

In view of these deficiencies, among others, the cited reference cannot anticipate independent claim 1 and its dependent claims. For these reasons, the Applicant respectfully requests withdrawal of the rejections under 35 U.S.C. § 102.

Claim Features of Independent Claim 16 Omitted from Cited Reference

The present independent claim 16 recites, *inter alia*, “a motor mountable base comprising a short-circuit tripping disconnect; and a replaceable control unit removably coupled to the motor mountable base, wherein the replaceable control unit comprises control circuitry configured to control a motor.”

The Examiner stated that Knox discloses:

a motor mountable base [Fig. 3 housing base 41; par. 0020 modular base housing portion] comprising a short-circuit tripping disconnect [Fig. 4 trip contact relay 66 is a short circuit protective device that works in conjunction with the DSP 55]; and a replaceable control unit [Fig. 5 microcontroller 75; par. 0104] removably coupled to the motor mountable base, wherein the modular control unit comprises a control circuitry [Digital Signal Processor DSP 55] selected for a desired machine.

Office Action, pages 4-5. The Examiner’s analysis is flawed for several reasons.

First, the Examiner has identified the DSP 55 of Knox as the control circuitry of the replaceable control unit. The DSP 55 is a component of the digital programmable motor overload protector 1, not the micro-controller 75. Knox, page 5, paragraph [0095]. Therefore, the Examiner has not identified a replaceable control unit having “control circuitry configured to control a motor” as recited in the present independent claim 16. As such, the Examiner has failed to make a *prima facie* case of anticipation under Section 102.

Assuming, *arguendo*, that the Examiner actually intended to identify the removable user interface 2 as the replaceable control unit of the present claim, the micro-controller 75 cannot be construed as “control circuitry configured to control a motor” as recited in the present independent claim 16. The micro-controller 75 controls the removable user interface 2, not the motor to which the overload protector is connected. Knox, page 19, paragraph [0222] – page 21, paragraph [0234]; Figs. 48-51.

In view of these deficiencies, among others, the cited reference cannot anticipate independent claim 16 and its dependent claims. For these reasons, the Applicant respectfully requests withdrawal of the rejections under 35 U.S.C. § 102.

Claim Features of Independent Claim 27 Omitted from Cited Reference

The present independent claim 27 recites, *inter alia*, “a modular control unit replaceably mountable to an on-machine motor protection base, wherein the modular control unit comprises at least one motor control device operable with at least one motor protection device of the on-machine motor protection base, and wherein the modular control unit comprises control circuitry configured to control at least one machine in the machine system.”

The Examiner stated that Knox discloses:

a modular control unit [Fig. 5 microcontroller 75; par. 0104] replaceably mountable to an on-machine motor protection base [Fig. 3 housing base 41; par. 0020 modular base housing portion], wherein the modular control unit comprises at least one motor control device [Fig. 5 microcontroller 75; par. 0104] operable with at least one motor protection device [Fig. 3 the Digital Signal Processor DSP 55 in housing 46; par. 0008; par. 0095 lines 3-5]; of the on-machine motor protection base, wherein the modular control unit comprises a control circuitry [Digital Signal Processor DSP 55].

Office Action, pages 6-7. The Examiner’s analysis is flawed for several reasons.

First, the Examiner has identified the DSP 55 of Knox as both the motor protection device of the on-machine motor protection base and the control circuitry of the modular control unit. This reasoning cannot stand. The DSP 55 is a component of the digital programmable motor overload protector 1, not the micro-controller 75. Knox, page 5, paragraph [0095]. Therefore, the Examiner has not identified a modular control unit having “control circuitry configured to control at least one machine in the machine system” as recited in the present independent claim 27. As such, the Examiner has failed to make a *prima facie* case of anticipation under Section 102.

Assuming, *arguendo*, that the Examiner actually intended to identify the removable user interface 2 as the modular control unit of the present claim, the micro-controller 75 cannot be construed as “control circuitry configured to control at least one machine in the machine system” as recited in the present independent claim 27. The micro-controller 75 controls the removable user interface 2, not the system to which the overload protector is connected. Knox, page 19, paragraph [0222] – page 21, paragraph [0234]; Figs. 48-51.

In view of these deficiencies, among others, the cited reference cannot anticipate independent claim 27 and its dependent claims. For these reasons, the Applicant respectfully requests withdrawal of the rejections under 35 U.S.C. § 102.

Claim Features of Independent Claim 31 Omitted from Cited Reference

The present independent claim 31 recites, *inter alia*, “an on-machine base comprising a machine protection device; and a selectable control unit replaceably mountable to the on-machine base, wherein the on-machine base and the selectable control unit are cooperative to provide desired on-machine controllability, wherein the selectable control unit comprises control circuitry configured to control at least one machine in the machine system.”

The Examiner stated that Knox discloses:

an on-machine base [Fig. 3 housing base 41; par. 0020 modular base housing portion] comprising a machine protection device [Fig. 3 the Digital Signal Processor DSP 55 in housing 46; par. 0008]; and a selectable control unit [Fig. 5 microcontroller 75; par. 0104] replaceably mountable to the on-machine base, wherein the on-machine base and the selectable control unit are cooperative to provide desired on-machine controllability [DSP 55 of Fig. 4 in conjunction with microcontroller 75 of Fig. 5], wherein the modular control unit comprises a control circuitry [Digital Signal Processor DSP 55].

Office Action, pages 7-8. The Examiner's analysis is flawed for several reasons.

First, the Examiner has identified the DSP 55 of Knox as both the machine protection device of the on-machine base and the control circuitry of the selectable control unit. This reasoning cannot stand. The DSP 55 is a component of the digital programmable motor overload protector 1, not the micro-controller 75. Knox, page 5, paragraph [0095]. Therefore, the Examiner has not identified a modular control unit having "control circuitry configured to control at least one machine in the machine system" as recited in the present independent claim 31. As such, the Examiner has failed to make a *prima facie* case of anticipation under Section 102.

Assuming, *arguendo*, that the Examiner actually intended to identify the removable user interface 2 as the modular control unit of the present claim, the micro-controller 75 cannot be construed as "control circuitry configured to control at least one machine in the machine system" as recited in the present independent claim 31. The micro-controller 75 controls the removable user interface 2, not the system to which the overload protector is connected. Knox, page 19, paragraph [0222] – page 21, paragraph [0234]; Figs. 48-51.

In view of these deficiencies, among others, the cited reference cannot anticipate independent claim 31 and its dependent claims. For these reasons, the Applicant respectfully requests withdrawal of the rejections under 35 U.S.C. § 102.

Claim Features of Independent Claim 34 Omitted from Cited Reference

The present independent claim 34 recites, *inter alia*, “a machine mountable base, comprising: a short-circuit protective device; and a disconnect device; and a modular control unit replaceably mountable to the machine mountable base, wherein the modular control unit comprises control circuitry configured to control at least one machine in the system of distributed machines.”

The Examiner stated that Knox discloses:

a machine mountable base [Fig. 3 housing base 41; par. 0020 modular base housing portion], comprising a short-circuit protective device [Fig. 3 the Digital Signal Processor DSP 55 in housing 46; par. 0008], and a disconnect device, and a modular control unit [Fig. 5 microcontroller 75; par. 0104] replaceably mountable to the machine mountable base [par. 0030], wherein the module control unit comprises control circuitry [Digital Signal Processor DSP 55].

Office Action, page 8. The Examiner’s analysis is flawed for several reasons.

First, the Examiner has identified the DSP 55 of Knox as both the short-circuit protection device of the machine mountable base and the control circuitry of the modular control unit. This reasoning cannot stand. The DSP 55 is a component of the digital programmable motor overload protector 1, not the micro-controller 75. Knox, page 5, paragraph [0095]. Therefore, the Examiner has not identified a modular control unit having “control circuitry configured to control at least one machine in the system of distributed machines” as recited in the present independent claim 34. As such, the Examiner has failed to make a *prima facie* case of anticipation under Section 102.

Assuming, *arguendo*, that the Examiner actually intended to identify the removable user interface 2 as the modular control unit of the present claim, the micro-controller 75 cannot be construed as “control circuitry configured to control at least one machine in the system of distributed machines” as recited in the present independent

claim 34. The micro-controller 75 controls the removable user interface 2, not the system to which the overload protector is connected. Knox, page 19, paragraph [0222] – page 21, paragraph [0234]; Figs. 48-51.

In view of these deficiencies, among others, the cited reference cannot anticipate independent claim 34 and its dependent claims. For these reasons, the Applicant respectfully requests withdrawal of the rejections under 35 U.S.C. § 102.

Claim Features of Independent Claim 51 Omitted from Cited Reference

The present independent claim 51 recites, *inter alia*, “a modular base comprising motor protection circuitry; and a modular control unit comprising motor control circuitry cooperatively operable with the motor protection circuitry, wherein at least one of the modular base and the modular control unit is selectively replaceable, and wherein the control circuitry is configured to control the motor.”

The Examiner stated that Knox discloses:

a modular base comprising motor protection circuitry; a module control unit comprising motor control circuitry cooperatively operable with the motor protection circuitry, wherein at least one of the modular base and the modular control unit is selectively replaceable [the limitations of this claim have previously been met by the limitations of the preceding claims 1, 16, 27, and 31].

Office Action, pages 8-9. The Examiner’s analysis is flawed for several reasons.

In the preceding claim 1, the Examiner identified the DSP 55 of Knox as the motor protection circuitry of the modular base and the control circuitry of the modular control unit. The DSP 55 is a component of the digital programmable motor overload protector 1, not the micro-controller 75. Knox, page 5, paragraph [0095]. Therefore, the Examiner has not identified a modular control unit having control circuitry “configured to control the motor” as recited in the present independent claim 51. As such, the Examiner has failed to make a *prima facie* case of anticipation under Section 102.

Assuming, *arguendo*, that the Examiner actually intended to identify the removable user interface 2 as the replaceable control unit of the present claim, the micro-controller 75 cannot be construed as control circuitry “configured to control the motor” as recited in the present independent claim 51. The micro-controller 75 controls the removable user interface 2, not the motor to which the overload protector is connected. Knox, page 19, paragraph [0222] – page 21, paragraph [0234]; Figs. 48-51.

In view of these deficiencies, among others, the cited reference cannot anticipate independent claim 51 and its dependent claims. For these reasons, the Applicant respectfully requests withdrawal of the rejections under 35 U.S.C. § 102.

Claim Features of New Dependent Claims Omitted from Cited Reference

In addition to the deficiencies already identified above, Applicant respectfully asserts that features of the new dependent claims 64-75 cannot be found anywhere in the cited reference.

The present claim 64 depending from independent claim 1 recites, *inter alia*, “wherein the modular control unit comprises an output connector configured to couple with the machine.” The removable user interface module 2 does not control the machine, but rather serves as an interface between the user and the digital programmable motor overload protector 1. As such, it is only configured to couple with the base, not the machine itself. Therefore, the cited reference cannot anticipate claim 64. Similar dependent claims have been added for each independent claim.

The present claim 65 depending from independent claim 1 recites, *inter alia*, “wherein the modular control unit is selected from and interchangeable with a plurality of modular control units, each having different control circuitry.” Nothing in Knox teaches or suggests interchanging different modular control units. Even if the removable user interface module 2 of Knox can be interchanged with other modules, there is no suggestion that other modules with “different control circuitry” could be used. Therefore,

the cited reference cannot anticipate claim 65. Similar dependent claims have been added for each independent claim.

Claim Rejections under 35 U.S.C. § 103(a)

The Examiner rejected claims 10-11, 22-23, and 57-58 under 35 U.S.C. § 103(a) as being unpatentable over Knox in view of Hollenbeck (U.S. Patent No. 5,557,182). The Applicant respectfully traverses this rejection.

Legal Precedent

The burden of establishing a *prima facie* case of obviousness falls on the Examiner. *Ex parte Wolters and Kuypers*, 214 U.S.P.Q. 735 (PTO Bd. App. 1979). Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention absent some teaching or suggestion supporting the combination. *ACS Hospital Systems, Inc. v. Montefiore Hospital*, 732 F.2d 1572, 1577, 221 U.S.P.Q. 929, 933 (Fed. Cir. 1984). The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 U.S.P.Q.2d. 1430 (Fed. Cir. 1990). Accordingly, to establish a *prima facie* case, the Examiner must not only show that the combination includes all of the claimed elements, but also a convincing line of reason as to why one of ordinary skill in the art would have found the claimed invention to have been obvious in light of the teachings of the references. *Ex parte Clapp*, 227 U.S.P.Q. 972 (B.P.A.I. 1985). The Examiner must provide objective evidence, rather than subjective belief and unknown authority, of the requisite motivation or suggestion to combine or modify the cited references. *In re Lee*, 61 U.S.P.Q.2d. 1430 (Fed. Cir. 2002). Moreover, a statement that the proposed modification would have been “well within the ordinary skill of the art” based on individual knowledge of the claimed elements cannot be relied upon to establish a *prima facie* case of obviousness without some objective reason to combine the teachings of the references. *Ex parte Levengood*, 28 U.S.P.Q.2d 1300 (Bd. Pat. App. & Inter. 1993); *In re Kotzab*, 217 F.3d 1365, 1371, 55 U.S.P.Q.2d.

1313, 1318 (Fed. Cir. 2000); *Al-Site Corp. v. VSI Int'l Inc.*, 174 F.3d 1308, 50 U.S.P.Q.2d 1161 (Fed. Cir. 1999).

It is improper to combine references where the references teach away from their combination. *In re Grasselli*, 713 F.2d 731, 743, 218 U.S.P.Q. 769, 779 (Fed. Cir. 1983); M.P.E.P. § 2145. Moreover, if the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. *In re Ratti*, 270 F.2d 810, 123 U.S.P.Q. 349 (CCPA 1959); *see* M.P.E.P. § 2143.01(VI). If the proposed modification or combination would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984); *see* M.P.E.P. § 2143.01(V).

Improper Combination – References Teach Different Principles of Operation

The cited references teach contrastingly different intended purposes and principles of operation, which would change if the cited references were hypothetically combined as suggested by the Examiner. As summarized above, a proposed modification or combination of references is entirely improper and insufficient to support a *prima facie* case of obviousness, where the proposed modification or combination would change the principle of operation of the cited reference or render the cited reference unsatisfactory for its intended purpose.

Knox discloses a motor overload protector having a removable user interface module. The motor overload protector “provides low noise, low distortion, and high accuracy data acquisition for low voltage motors on par with the systems designed for medium and high voltage motor protection.” Knox, page 1, paragraph [0002]. The user interface module displays messages from the motor overload protector. Knox, page 7, paragraph [1017]. The principal of operation of Knox requires that the removable module be a user interface.

In contrast, Hollenbeck discloses “a controller providing a desired operating area for a motor driving a fan for inducing a draft in an exhaust.” Hollenbeck, column 1, lines 26-28. The principal of operation of Hollenbeck requires that the controller runs a motor.

The Examiner stated that “Knox’s device is implicitly capable of controlling/protecting any motor in general [par. 0002; par. 0010], including a soft start motor controller” or “a variable frequency machine drive.” Office Action, pages 10-11. The Examiner seems to be confusing elements of the present claims in making this combination. Claims 10-11, 22-23 and 57-58 are not to the type of motor being controlled, but rather are further limitations on the controllers in the respective independent claims.

Turning to the claims, the present claim 10 and 11 recite the limitations that the modular control unit of claim 1 is a soft start machine controller or a variable frequency machine drive, respectively. Claims 22 and 23 recite the limitations that the replaceable control unit is a soft start motor controller or a variable frequency machine drive, respectively. Claims 57 and 58 recite the limitations that the control circuitry is a variable frequency machine drive or a soft-start machine controller, respectively.

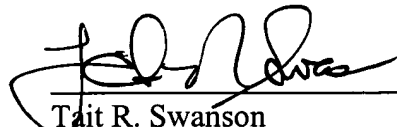
As such, combination of the overload controller in Knox with the alternative controllers the Examiner claimed are disclosed in Hollenbeck would render the overload controller inoperable for its intended purpose. Replacing the user interface module of Knox with a soft start machine controller or variable frequency machine drive would defeat all of the overload notification and monitoring features of Knox. In view of these incompatible principles of operation, the cited references cannot be combined and the Examiner’s rejection is improper. For at least these reasons among others, the Applicant respectfully requests withdrawal of the foregoing combination and the corresponding rejections under 35 U.S.C. § 103.

Conclusion

Applicant respectfully submits that all pending claims should be in condition for allowance. However, if the Examiner believes certain amendments are necessary to clarify the present claims or if the Examiner wishes to resolve any other issues by way of a telephone conference, the Examiner is kindly invited to contact the undersigned attorney at the telephone number indicated below.

Respectfully submitted,

Date: October 26, 2006



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